# Appendix 1- Table Showing the proportion of each automaker in the survey sample, the proportion in the PEV market (from 2011-2018), and the weights used in the model for each automaker.

|  |  |  |  |
| --- | --- | --- | --- |
| **Automaker** | **Survey Prob** | **Market Prob (2011-2018)** | **Weight** |
| **Audi** | 0.007 | 0.008 | 1.16 |
| **BMW** | 0.047 | 0.072 | 1.52 |
| **Cadillac** | 0.001 | 0.003 | 2.76 |
| **Chevrolet** | 0.227 | 0.177 | 0.78 |
| **Chrysler** | 0.002 | 0.010 | 4.37 |
| **Fiat** | 0.035 | 0.018 | 0.51 |
| **Ford** | 0.107 | 0.100 | 0.93 |
| **Honda** | 0.032 | 0.022 | 0.69 |
| **Hyundai** | 0.008 | 0.016 | 1.95 |
| **Kia** | 0.010 | 0.011 | 1.05 |
| **Mercedes** | 0.002 | 0.009 | 4.95 |
| **Mitsubishi** | 0.002 | 0.006 | 2.92 |
| **Nissan** | 0.136 | 0.114 | 0.84 |
| **Smart** | 0.004 | 0.007 | 1.88 |
| **Tesla** | 0.186 | 0.306 | 1.65 |
| **Toyota** | 0.151 | 0.088 | 0.58 |
| **VW** | 0.042 | 0.012 | 0.28 |

# Appendix 2- Full Table of Vehicle in this Study, Including Vehicle Type, Make, Purchase Year, and Ownership for Those That Continued and Discontinued PEV Ownership (note the counts and percentages are for each row allowing a comparison of the percent of each vehicle type, make, purchase year, and ownership we discontinued ownership).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | | **Continued** | | **Discontinued** | |
| **Row %** | **N** | **Row %** | **N** |
| **Vehicle Type** | **BEV** | 80.65% | 850 | 19.35% | 204 |
| **PHEV** | 76.89% | 609 | 23.11% | 183 |
| **Vehicle Make** | **Audi** | 66.67% | 8 | 33.33% | 4 |
| **BMW** | 78.99% | 109 | 21.01% | 29 |
| **Cadillac** | 100.00% | 3 | 0.00% | 0 |
| **Chevrolet** | 85.19% | 276 | 14.81% | 48 |
| **Fiat** | 61.98% | 75 | 38.02% | 46 |
| **Ford** | 72.52% | 190 | 27.48% | 72 |
| **Honda** | 92.86% | 26 | 7.14% | 2 |
| **Hyundai** | 46.67% | 7 | 53.33% | 8 |
| **Kia** | 79.17% | 19 | 20.83% | 5 |
| **Mercedes-Benz** | 87.50% | 7 | 12.50% | 1 |
| **Mitsubishi** | 66.67% | 2 | 33.33% | 1 |
| **Nissan** | 79.40% | 316 | 20.60% | 82 |
| **Smart** | 83.33% | 10 | 16.67% | 2 |
| **Tesla** | 90.40% | 160 | 9.60% | 17 |
| **Toyota** | 75.53% | 142 | 24.47% | 46 |
| **Volkswagen** | 81.82% | 108 | 18.18% | 24 |
| **Vehicle Purchase Year** | **2011** | 84.00% | 21 | 16.00% | 4 |
| **2012** | 75.58% | 65 | 24.42% | 21 |
| **2013** | 80.26% | 248 | 19.74% | 61 |
| **2014** | 82.14% | 276 | 17.86% | 60 |
| **2015** | 78.74% | 337 | 21.26% | 91 |
| **2016** | 76.52% | 414 | 23.48% | 127 |
| **2017** | 80.36% | 90 | 19.64% | 22 |
| **2018** | 85.71% | 6 | 14.29% | 1 |
| **2019** | 0.00% | 0 | 0.00% | 0 |
| **Vehicle Ownership** | **Leased New** | 0.791946309 | 1062 | 0.2080537 | 279 |
| **Purchased new** | 0.837092732 | 334 | 0.1629073 | 65 |

# Appendix 3- Table Showing Factor Analysis of Lifestyle Attitudinal Statements And The Factor Loading For Each of The 8 Factors.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Commuting in congestion, stressful commute** | **Like Suburban Living** | **Outdoor lifestyle** | **Enjoy shopping in stores** | **Exercise not important** | **Pro-technology** | **Having children means need a car, like routine** | **Congestion is a problem, try to make use of time travelling** |
| **My commute is stressful** | 0.83348 | -0.0519 | 0.02196 | 0.03888 | 0.0576 | 0.02317 | 0.07077 | 0.01798 |
| **Traffic congestion is a major problem for me personally** | 0.49319 | 0.06928 | -0.06488 | 0.02396 | -0.01411 | 0.04877 | -0.00388 | 0.42235 |
| **The time I spend commuting is generally wasted time** | 0.3725 | 0.00017 | 0.02328 | -0.02198 | 0.04684 | 0.03364 | 0.01694 | 0.02506 |
| **I prefer to live in a spacious home, even if it is farther from public transportation and many places I go to** | -0.00666 | 0.82748 | 0.00547 | 0.03537 | 0.0459 | 0.05865 | -0.00771 | 0.0881 |
| **I like the idea of living somewhere with large yards and lots of space between homes** | -0.01719 | 0.6663 | 0.09852 | -0.03523 | 0.01654 | -0.01253 | 0.0479 | 0.14978 |
| **Most of the time, I have no reasonable alternative to driving** | 0.12417 | 0.24898 | -0.02149 | 0.02938 | 0.02954 | 0.05351 | 0.20694 | -0.11559 |
| **I enjoy having an outdoor lifestyle (such as hiking, camping, winter sports, water sports)** | 0.00449 | 0.01745 | 0.87262 | -0.04823 | -0.02503 | -0.03247 | -0.04872 | 0.05037 |
| **I like traveling to visit outdoor destinations (e.g National and State Parks)** | 0.02504 | 0.01973 | 0.63988 | 0.00697 | -0.00329 | -0.00753 | -0.03406 | -0.04781 |
| **Getting regular exercise is very important to me** | -0.0422 | -0.1054 | 0.23794 | 0.04292 | -0.45149 | 0.02836 | 0.14923 | 0.0969 |
| **I prefer to shop in a store rather than online** | -0.01402 | -0.05223 | -0.03595 | 1.0266 | -0.04466 | 0.07791 | 0.04686 | 0.01044 |
| **Technology creates at least as many problems as it does solutions** | 0.07469 | -0.00679 | 0.05432 | 0.14324 | 0.10473 | -0.27893 | 0.04826 | 0.11188 |
| **The importance of exercise is overrated** | 0.01271 | -0.0308 | 0.034 | -0.02527 | 0.96712 | -0.01806 | 0.05273 | 0.05462 |
| **Getting stuck in traffic does not bother me that much** | -0.25232 | -0.01179 | 0.02733 | 0.04968 | 0.15241 | 0.10741 | 0.0068 | -0.12001 |
| **I like to be among the first people to have the latest technology** | 0.03213 | 0.01294 | -0.09125 | 0.00081 | 0.07193 | 0.738 | -0.03668 | 0.09533 |
| **I like trying things that are new and different** | 0.03386 | -0.01695 | 0.11633 | 0.02521 | -0.02938 | 0.57929 | 0.01336 | 0.07415 |
| **Having children means you have to have a car** | 0.01762 | 0.04769 | 0.01098 | -0.02393 | -0.02249 | 0.01121 | 0.4534 | -0.06276 |
| **I like sticking to a routine** | -0.02121 | -0.04238 | -0.06238 | -0.02338 | 0.00919 | -0.08891 | 0.45182 | 0.11621 |
| **I definitely want to own a car** | -0.03411 | 0.22275 | 0.01312 | 0.05912 | -0.0174 | 0.08484 | 0.2998 | -0.09485 |
| **I enjoy shopping online** | 0.03921 | -0.03563 | 0.00212 | -0.39324 | 0.02083 | 0.2012 | 0.27752 | 0.04665 |
| **I try to make good use of the time I spend traveling** | -0.039 | -0.00401 | 0.10854 | -0.01059 | -0.04056 | 0.13215 | 0.04661 | 0.39875 |
| **My commute is generally pleasant** | -0.80474 | 0.0327 | -0.00738 | -0.00195 | 0.03766 | 0.03131 | 0.09822 | 0.29902 |
| **I prefer to live close to transit even if it means I'll have a smaller home and live in a more crowded area** | 0.05348 | -0.73675 | 0.067 | 0.05023 | 0.03824 | 0.08697 | 0.06127 | 0.12483 |

APPENDIX 4- Sociodemographic information for respondents

Table 5: Sociodemographic profile of respondents who continued PEV ownership and those who discontinued ownership (for reported answers in survey 2).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | | **Continued** | | **Discontinued** | |
| **%** | **N** | **%** | **N** |
| **Household People** | **1** | 8.83% | 126 | 16.23% | 62 |
| **2** | 43.45% | 620 | 45.55% | 174 |
| **3** | 18.99% | 271 | 13.09% | 50 |
| **4** | 22.99% | 328 | 19.11% | 73 |
| **5 or more** | 5.74% | 82 | 6.01% | 23 |
| **Household Vehicles** | **1** | 21.45% | 313 | 35.66% | 138 |
| **2** | 50.79% | 741 | 42.64% | 165 |
| **3** | 18.78% | 274 | 14.73% | 57 |
| **4** | 6.10% | 89 | 3.62% | 14 |
| **5 or more** | 2.88% | 42 | 3.36% | 13 |
| **Age (years)** | **15 to 18** | 0.07% | 1 | 0.00% | 0 |
| **19 to 29** | 1.19% | 17 | 2.11% | 8 |
| **30 to 39** | 10.75% | 153 | 17.11% | 65 |
| **40 to 49** | 23.05% | 328 | 23.42% | 89 |
| **50 to 59** | 27.20% | 387 | 20.26% | 77 |
| **60 to 69** | 22.07% | 314 | 25.53% | 97 |
| **70 to 79** | 11.95% | 170 | 9.47% | 36 |
| **80 or older** | 1.97% | 28 | 1.58% | 6 |
| **Decline to state** | 1.76% | 25 | 0.53% | 2 |
| **Gender** | **Decline to state** | 1.48% | 21 | 0.79% | 3 |
| **Female** | 21.93% | 312 | 31.32% | 119 |
| **Male** | 76.46% | 1088 | 67.63% | 257 |
| **TransFemale/Transwoman** | 0.07% | 1 | 0.00% | 0 |
| **TransMale/Transman** | 0.00% | 0 | 0.00% | 0 |
| **Genderqueer/non-binary** | 0.07% | 1 | 0.26% | 1 |
| **Household Income** | **Less than $50,000** | 1.91% | 25 | 4.18% | 14 |
| **$50,000 to $99,999** | 8.56% | 112 | 14.93% | 50 |
| **$100,000 to $149,999** | 17.57% | 230 | 22.09% | 74 |
| **$150,000 to $199,999** | 18.18% | 238 | 19.40% | 65 |
| **$200,000 to $249,999** | 11.54% | 151 | 8.96% | 30 |
| **$250,000 to $299,999** | 7.33% | 96 | 6.87% | 23 |
| **$300,000 to $349,999** | 4.66% | 61 | 2.69% | 9 |
| **$350,000 to $399,999** | 3.28% | 43 | 2.09% | 7 |
| **$400,000 to $449,999** | 1.83% | 24 | 1.19% | 4 |
| **$450,000 to $499,999** | 1.45% | 19 | 0.60% | 2 |
| **$500,000 or more** | 8.33% | 109 | 2.99% | 10 |
| **I prefer not to answer** | 15.36% | 201 | 14.03% | 47 |
| **Highest Level of Education** | **College Graduate** | 30.71% | 402 | 33.13% | 111 |
| **High School Graduate or GED** | 1.15% | 15 | 1.79% | 6 |
| **Masters, Doctorate, or Professional Degree** | 49.73% | 651 | 45.97% | 154 |
| **prefer not to answer** | 1.60% | 21 | 0.60% | 2 |
| **Some College** | 9.32% | 122 | 10.45% | 35 |
| **Some Graduate School** | 7.41% | 97 | 8.06% | 27 |
| **Some High School** | 0.08% | 1 | 0.00% | 0 |
| **Home Type** | **Mobile Home** | 0.76% | 10 | 1.19% | 4 |
| **Apartment Building** | 4.81% | 63 | 11.64% | 39 |
| **Attached house (townhouse, duplex, triplex)** | 8.71% | 114 | 13.13% | 44 |
| **Detached house, also called a single family home.** | 85.71% | 1122 | 74.03% | 248 |
| **Home Ownership** | **Other** | 0.99% | 13 | 0.30% | 1 |
| **Own** | 89.24% | 1169 | 78.51% | 263 |
| **Rent** | 9.77% | 128 | 21.19% | 71 |

Table 6: T-test results for number of people in the household, number of vehicles in the household, age of respondent, and household income for those who continued and those who discontinued PEV ownership.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Level** | **Number** | **Mean** | **Std Error** | **P Value** |
| **Household people** | **Continued** | 1427 | 2.75613 | 0.0317 | 0.019 |
| **Discontinued** | 382 | 2.59424 | 0.06127 |  |
| **Number of vehicles in the household** | **Continued** | 1459 | 2.18163 | 0.02469 | <0.001 |
| **Discontinued** | 387 | 1.96382 | 0.04794 |  |
| **Age** | **Continued** | 1398 | 55.2525 | 0.34577 | 0.0156 |
| **Discontinued** | 378 | 53.4392 | 0.66496 |  |
| **Household income ($1000s)** | **Continued** | 1108 | 225.722 | 3.7364 | <0.001 |
| **Discontinued** | 288 | 178.299 | 7.3286 |  |

Table 7: Chi-square test results comparing the distributions of gender, highest level of education, home ownership, and home type for those who continued PEV ownership and those who discontinued ownership.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **N** | **DF** | **ChiSquare** | **Prob>ChiSq** |
| **Gender** | 1803 | 4 | 16.529 | 0.0024\* |
| **Highest level of education** | 1644 | 6 | 4.837 | 0.5649 |
| **Home ownership** | 1645 | 2 | 33.813 | <0.001 |
| **Home type** | 1644 | 3 | 30.434 | <0.001 |

Table 8: T-test results for annual VMT, one-way commute, and number of trips over 200 miles and the change in these metrics from period 1 and period 2 for households who have continued or discontinued PEV ownership.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Level** | **Number** | **Mean** | **Std Error** | **P Value** |
| **Annual VMT (1,000 miles)** | **Continued** | 1396 | 10.8541 | 0.15044 | 0.0354\* |
| **Discontinued** | 345 | 10.1424 | 0.30261 |
| **One-way commute distance** | **Continued** | 1459 | 15.0424 | 0.46285 | <0.001\*\*\* |
| **Discontinued** | 387 | 10.864 | 0.8987 |
| **Number of trips over 200 miles** | **Continued** | 1459 | 5.60452 | 0.23054 | 0.3375 |
| **Discontinued** | 387 | 5.12145 | 0.44763 |